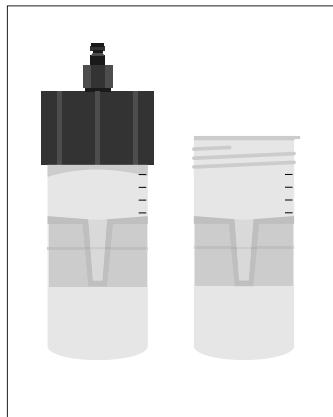


# Vivaspin® 100



Device fits standard 250 mL rotors

## 20 to 98 mL samples

Vivaspin® 100 bridges the gap between centrifugal concentrators and crossflow cassettes. These devices feature vertical membranes for high speed processing of even high particle loaded samples. In addition, a unique choice between centrifugal, pressure or pressure-shake operating methods provides unrivaled process flexibility.

Fitting swing bucket rotors accepting 250 mL bottles, Vivaspin® 100 offers the highest sample capacity available in a centrifugal device – up to an astonishing 90 mL.

Vivaspin® 100 units can also be used for single or extremely sensitive samples of up to 98 mL when pressurized and left on the bench, or for temperature-sensitive samples, placed into a refrigerator. Pressurization is made easy by use of quick-release connectors and can be combined with orbital shaking for even faster sample concentration.

In whichever mode Vivaspin® 100 is used, the vertical membrane design inhibits membrane fouling while the integrated dead-stop impedes concentration to dryness and loss of sample.

## Technical Specifications

### Concentrator capacity

Swing bucket rotor	90 mL
With pressure head	98 mL

### Dimensions

Length x diameter	123 x 62 mm 197 x 62 mm with pressure head
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Active membrane area	23.5 cm <sup>2</sup>
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Hold-up volume of membrane	< 250 µL
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Dead-stop volume	350 µL
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### Materials of construction

Body	Polycarbonate (PC)
Filtrate vessel	Polycarbonate (PC)
Concentrator cap	Polypropylene (PP)
Pressure head	Polyoxymethylene (POM) and Aluminium (ALU)
Pressure head seal	Thermoplastic Elastomer (TPE)
Membrane	Polyethersulfone (PES)

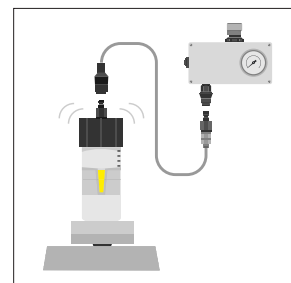
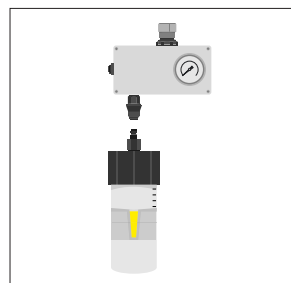
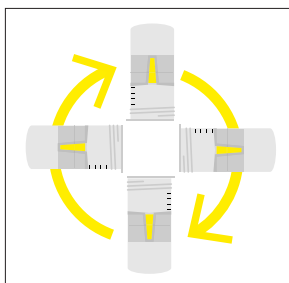
## Equipment Required

### Centrifuge

Rotor type	Swing bucket
Rotor cavity	To fit 250 mL (60 mm) centrifuge bottles (maximum cavity depth 105 mm)
Maximum RCF	2,000 g

### Pressure

Pressure accessories	VCA002, VCA800
Maximum pressure	5 bar (75 psi)



### Centrifuge

- Process convenience
- Low shear, no foaming
- Less visual control

### Pressure

- Highest process control
- Use in fridge or cold room
- Slower concentrations

### Pressure-shake

- High process control
- Ideal for single samples
- Faster concentrations

## Typical Performance Characteristics

90 mL start volume	Time to concentrate up to 30× at 20°C			Solute recovery
	Swing bucket, 2,000 g	Pressure, 4 bar (60 psi)		
		Static	Orbital shake	
BSA 1.0 mg/mL (66 kDa)				
5 kDa MWCO PES	22 min	75 min	25 min	96%
10 kDa MWCO PES	16 min	60 min	20 min	96%
30 kDa MWCO PES	16 min	60 min	20 min	94%
IgG 0.25 mg/mL (160 kDa)				
50 kDa MWCO PES	20 min	70 min	30 min	94%
100 kDa MWCO PES	20 min	85 min	30 min	90%
Latex beads 0.004% in DMEM + 10% FCS (55 nm)				
300 kDa MWCO PES	35 min	-	120 min	99%
Latex beads 0.004% in DMEM + 10% FCS (240 nm)				
1,000 kDa MWCO* PES	4 min	5 min	4 min	99%

## Ordering Information

Vivaspin® 100 PES with PP cap	2 pc	10 pc
5 kDa MWCO	VC1011	VC1012
10 kDa MWCO	VC1001	VC1002
30 kDa MWCO	VC1021	VC1022
50 kDa MWCO	VC1031	VC1032
100 kDa MWCO	VC1041	VC1042
300 kDa MWCO	VC1051	VC1052
1,000 kDa MWCO	VC1061	VC1062
0.2 µm	VC1071	VC1072

## Vivaspin® Equipment and Accessories

### Gas Pressure Ultrafiltration

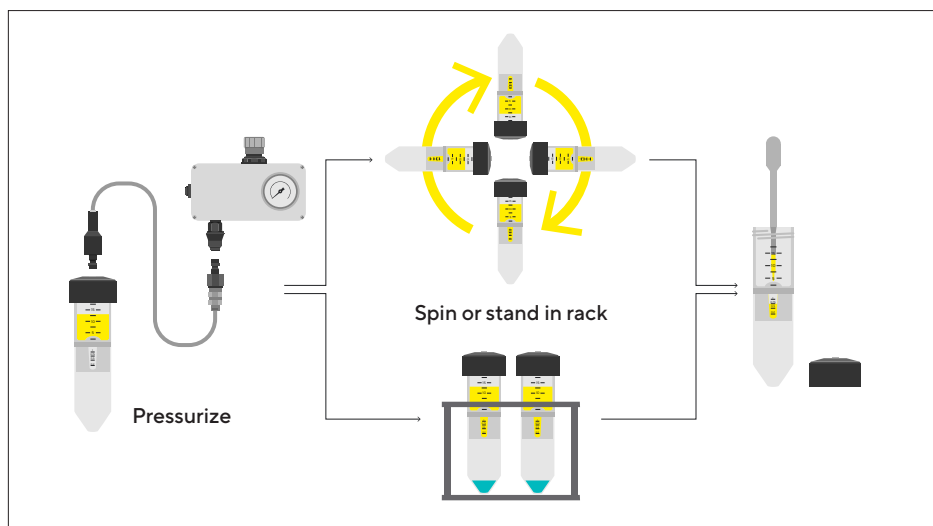
When an appropriate centrifuge is unavailable, or for single sample processing, Vivaspin® 20 and 100 centrifugal concentrators may be pressurized with compressed gas for bench-top concentration.

For even faster processing of samples in Vivaspin® 20, gas pressure can be combined with centrifugal force. This pressure-fugation method is particularly suitable for difficult to filter or viscous samples, such as serum, or when using low process temperatures, which reduce filtration speed, and generally when minimum process time is essential. In a similar way, Vivaspin® 100 may be pressurized and placed on an orbital shaker for faster processing.

### Constant Volume Diafiltration

In this procedure following concentration, a diafiltration cup inserted into the Vivaspin® 20 concentrator body is filled with buffer and centrifuged once to achieve 98% salt removal. This compares to the need for two centrifugation steps to achieve the same result with the re-fill and re-spin approach for discontinuous diafiltration.

The improved performance is due to the constant washing action of the exchange buffer from the diafiltration cup, as it replaces the original solvent and salts when they pass through the ultrafiltration membrane.



Using the Vivaspin® 20 pressure cap

## Ordering Information

Vivaspin® Equipment and Accessories	Pack Size	Prod. No.
Air pressure controller (APC) fitted with pressure gauge, regulator, over-pressure safety valve and female coupling. APCs supplied with extension line (4 mm pneumatic tubing, 1 m) with male and female couplings, and inlet tubing (6 mm pneumatic tubing, 1 m)	1	VCA002
Charge valve for pressure head VCA200	1	VCA005
Female coupling	1	VCA010
Male coupling	1	VCA011
Replacement extension line (4 mm pneumatic tubing, 3 m)	1	VCA012
Vivaspin® 20 pressure head	1	VCA200
Vivaspin® 100 pressure head with seals	1	VCA800
Vivaspin® 100 pressure head seals	10	VCA014
Diafiltration cups	12	VSA005